

**AES PUERTO RICO, L.P.
Guayama, Puerto Rico**

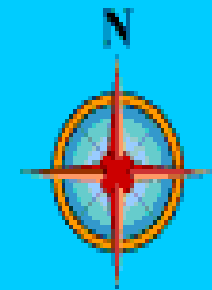
June 19, 2014 NPDES Enforcement Case Support Inspection Briefing

Presented by:

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Puerto Rico

Atlantic Ocean



Facility Location

Caribbean Sea

Facility Information

- Located on a flood plain near Las Mareas Bay
- North – TAPI; East – CPCPRC; South – wetlands and Las Mareas Bay channel; and West – AES Ilumina's photovoltaic panels complex
- Operation began in November, 2002
- Two units (525 MW – gross production; 454 MW - net production)

Facility Information (contd.)

- About 130 employees
- 84-acre site leveled above 100-year flood elevation
- Storm channel constructed to manage 100-year storm with on-site and off-site runoff -- 100-year storm (14.5 inches)
- Average rainfall for Guayama, PR is 60 inches/year (semi-arid)
- Marine cargo area located at Las Mareas Bay for limestone and coal unloading from cargo ships, and Aggremax loading into cargo ships

Brief on Facility's Run-on and Run-off Collection and Discharge Systems

Facility Information (contd.)

- Run-on from offsite and AES (non-regulated) site collected in concrete channel that discharges into wetlands



Facility Information (contd.)

- Run-on from neighboring lands on north side is collected in underground pipeline that discharges into wetlands



Facility Information (contd.)

- Run-off from TAPI's facility is collected and discharged into wetlands side-by-side AES's Outfall 003.

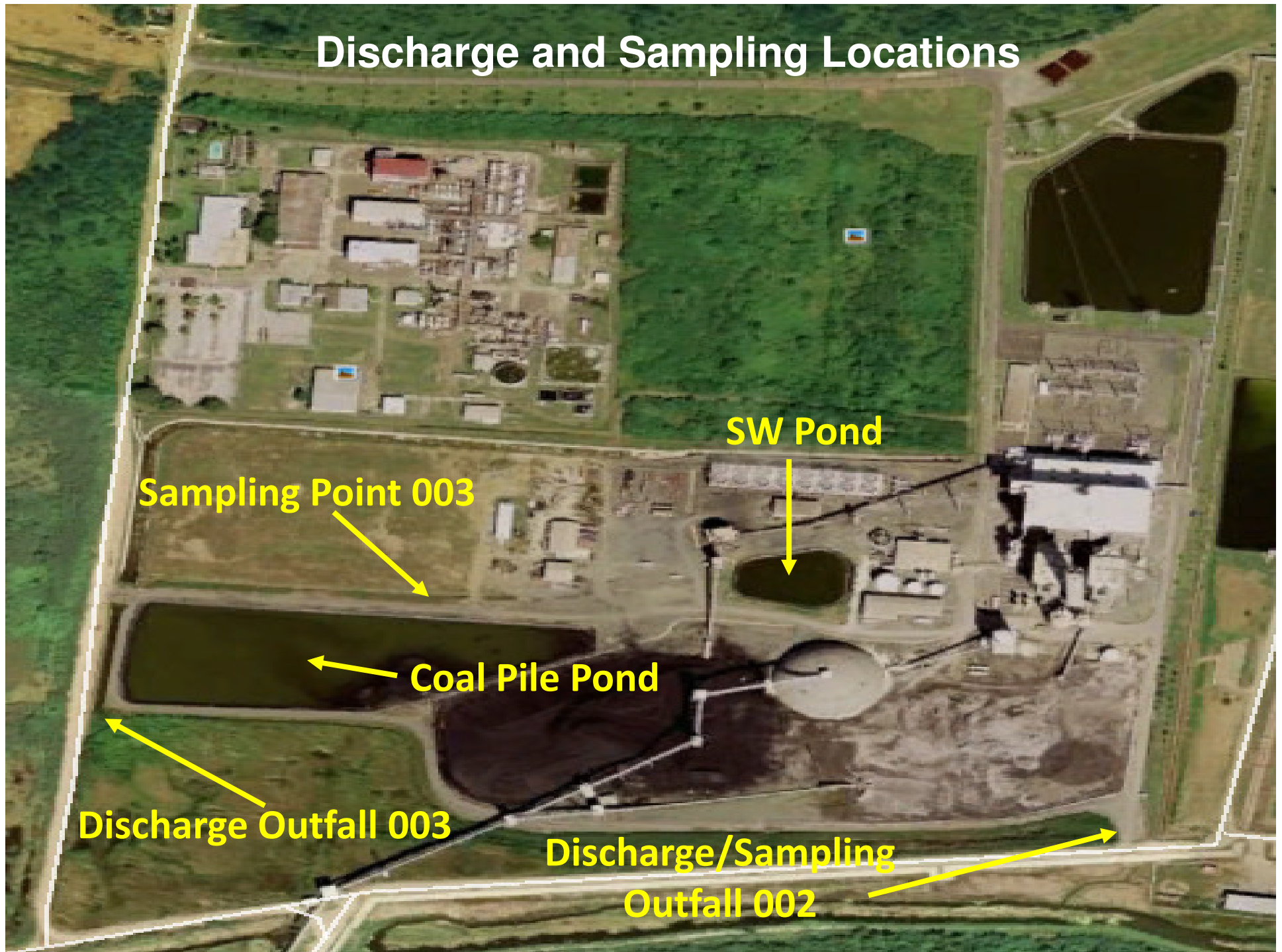


Facility Information (contd.)

- AES' site stormwater runoff associated with industrial activity is collected in a stormwater collection and discharge system. AES reuses the runoff collected at SW Pond for water production prior to overflow discharge.



Discharge and Sampling Locations



Facility Information (contd.)

- Run-off (stormwater and process wastewater) from production and material storage areas is collected and conveyed into Coal Pile Runoff Pond through swales and channels. No discharge from this Pond into wetlands. All wastewater is re-used for water production and dust control.



Sampling/Discharge Point 001



Preliminary Investigations

- In April, 2011, CEPD sent a RFI per CWA's Section 308(a) about an unauthorized discharge of pollutants (2-20-11) from cooling tower basin into wetlands.
- In July 2011, CEPD performed a CEI, and found that:
 - AES discharged(s) stormwater and non-stormwater without an NPDES from the Power Plant.
 - AES submitted a NOI for the marine cargo facility at Las Mareas Bay.
 - Coal Pile Runoff Pond overflowed into wetlands.
 - Lack of structural and non-structural BMPs across the board.
 - Lack of maintenance to storm sewers, and SW and Coal Pile Runoff Ponds.

Follow-up Actions

- Several face-to-face meetings in Oct-Dec. 2011 to discuss inspection's findings and required actions.
- ACO issued in December 2011 with milestones, schedules and reporting requirements, including:
 - As-built Topographic Survey
 - Hydrology/Hydraulic Study (H/H Study)
 - Engineering and Environmental Analysis
 - Water balance Analysis
 - Design/Construction of structural BMPs (100-year storm)
 - Monitoring SOPs, SWPPP Development & Training
 - Progress Reports

BMPs' Design, Construction & Maintenance

- In May 2013, CEPD approved structural and non-structural BMPs following a series of meetings and documents reviews:
 - 31 Structural BMPs
 - 55 Non-Structural BMPs
 - AES constructed 2 additional BMPs
- CEPD inspected the construction activities in August 2013.
- Substantial completion of the construction of structural BMPs achieved in September 2013.
- AES obtained 2008 MSGP coverage prior to permit expiration.

BMPs' Design, Construction & Maintenance

➤ Key Structural BMPs projects:

- Segregation of TAPI/AES regulated discharges
- Segregation of CPCPRC/AES regulated discharges
- Repairs to SW collection and discharge system
- Establishment of permanent sampling and discharge locations
- Segregation and management of stormwater and non-stormwater runoff within ash production, Aggremax, limestone storage, and coal storage

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Purposes/Objectives

To evaluate the areas of the Facility in which ash is produced, managed and stored, and to determine if appropriate and effective controls are implemented to prevent, eliminate and reduce ash migration into air and water.

To determine compliance with ACO concerning construction of structural BMPs, if time allowed!

Photo-Documentation on Aggremax, Limestone and Coal Piles Areas

Views depict the north slopes of the Aggremax pile.



Views depict the east and southeast slopes of the Aggremax pile.



Views depict the south and southwest slopes of the Aggremax pile.



Views depict different sides of the coal pile areas.



Views depict different sides of the coal pile runoff pond.



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Preliminary Findings

(Ash/Limestone/Coal Areas)

- The Aggremax storage pile continues to grow to a height greater than 70 feet. About 30,000 cubic yards are produced every month. Barge capacity is 20,000 cubic yards. Only being able to load one barge per month due to lack of barge availability.
- Uncontrolled Dust and Lack of Soil Stabilization
 - Water irrigation in facility roads applied (by water tank-mounted truck). One truck not enough to maintain wet roads and other areas at site.
 - Water irrigation in Aggremax pile -- inefficient use of sprinklers (about 4 observed) at top of the pile.
 - One employee watering (hose) areas in which heavy equipment observed within the Aggremax areas.
 - Particulate matter (dust, fine silt, etc.) observed all over the place.
 - No soil stabilization BMPs at Aggremax and coal pile slopes.
 - Numerous areas observed in need of crushed stone re-application for soil stabilization and dust control (e.g., dirt road on south side of site).



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Preliminary Findings

(Ash/Limestone/Coal Areas)

- Adequate Structural BMPs constructed/installed to segregate ash/coal/limestone from other industrial areas:
 - Re-pavement and re-grading
 - Low wall construction at several areas
 - Secondary containment
 - Gabions installation for erosion control
 - Relocation of Outfall 002
 - Segregation of stormwater from process wastewater







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Preliminary Findings

(Ash/Limestone/Coal Areas)

- Over-use of BMP controls and lack of replacement and maintenance at ash/coal/limestone areas:
 - Aggremax pile grew to a point in which gabions are almost covered and inefficient.
 - Silt fence in coal storage areas (north and south) need to be replaced.
 - Coal pile runoff pond yet to be cleaned and placed into operation. AES is a year late on this task but notified that it will be done by end of July, 2014. I doubt it based on previous experience with SW Pond.
 - Inadequate maintenance of concrete swale which collects and convey runoff into the coal pile runoff pond.



Environmental and Human Health Concerns

- Inspector observed (as never before) sediments, particulate matter and dust all over the place and employees without wearing respiratory protection.
- Particulate matter exacerbated due to dry weather, high winds and lack/inappropriate dust controls.
- Sediments accumulation at discharge point 002.



Environmental Harm at
Wetlands – Discharge 002



Other Concerns

- AES does not have an environmental management/staff structure to address all environmental statutes, regulations and permits:
 - Only one Environmental Coordinator
 - Rely heavily on off-site consulting services
 - EQB: Title V Air Permit; Plan CES; solid waste
 - EPA: NPDES MSGP at Power Plant and Marine Cargo
 - Homeland Security
 - Potential non-compliance with 2008 MSGP

- Discharges at concerned levels for Aluminum, Iron and Zinc, which triggers additional BMPs.

Follow-up Actions

- CEPD will send DVD to Regional Office with all photo-documentation including videos taken of the inspected areas.
- CEPD provided a copy to AES during the exit meeting.
- Regional office needs to provide information to CEPD technical staff about the ongoing discussions about Aggremax.
- CEPD to continue to provide support the DECA on FOIA's requests.

Follow-up Actions (contd.)

- Meeting with AES' environmental coordinator to complete discussion about pending actions in ACO, such as:
 - Coal Pile Runoff Pond
 - Revision to SWPPP
 - Reconfiguration of Sampling Points 002 and 003
 - Protection of inlets/catch basins
 - Slope stabilization for Aggemax and coal piles
 - Other BMPs that require maintenance and implementation

- Closure of existing ACO and issuance of new ACO for pending actions and non-compliance with 2008 MSGP.

Q's & A's